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Horizontal chamber die casting process, for aluminum and magnesium alloys, comprises forming a stabilized homogenized cylindrical melt volume for feeding and additional compression of the solidifying cast product

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JP 2000312958	A	20001114	JP 2000111666	A	20000413	200062
CN 1270863	A	20001025	CN 2000106494	A	20000411	200104
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Abstract (Basic): EP 1046444 A1  
Abstract (Basic):

NOVELTY - A horizontal chamber die casting process comprises forming a stabilized and homogenized cylindrical melt volume for feeding and additional compression of the solidifying cast product in the die.

DETAILED DESCRIPTION - A horizontal chamber die casting process comprises applying a vacuum to the chamber and piston, accelerating the melt before entry into the die and subjecting the die to pressure before or when the melt reaches the ingate opening. Before acceleration, the melt is formed to a cylindrical shape which is retained until achievement of hydrodynamic stabilization, temperature equalization and uniform pressure distribution in the cylindrical material volume and which is fed into the solidifying metal after filling of the die to provide additional compression during solidification of the cast product.

USE - For die casting of aluminum and magnesium alloys.

ADVANTAGE - The process provides die filling with a hydrodynamically equalized melt flow and cast product solidification under an additional compaction pressure without dispersal of the stream entering the die.

DESCRIPTION OF DRAWING(S) - The drawing shows a schematic view of a die casting machine.

melt container (1)

suction tube (2)

T-shaped casting chamber (3)

die cavity (5)

die halves (6, 7)

casting piston (8)

counter-pressure piston (9)

compression piston (10)

melt (13)

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